

# RETHINKING THE TRADITIONAL CLASSIFICATION OF HAWAIIAN POI POUNDERS

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## INTRODUCTION

At the turn of the century W. T. Brigham described the poi pounder as "an implement very prominently identified with Polynesian life: one that had its beginnings with the race and which will perhaps be the last of ancient things to fall from the hands of the dying people" (1902:36). Indeed, traditional poi pounders continue to be used in Hawai'i even today. In fact, they are among the most celebrated Hawaiian antiquities, a symbol of strength in Hawaiian culture.

Poi pounders, or *pōhaku ku'i poi*, are used for pounding cooked *kalo* (taro root) into poi, a main staple of the traditional Hawaiian diet. Taro root was steamed in an *imu*, or earth oven, peeled with a shell scraper, and placed on a wooden pounding board to be mashed with the stone pounder. The first step in the pounding process was to break each taro corm into pieces. Then water was added and the mixture was mashed until smooth and turned with one hand, with more water being added as needed through the course of the pounding (Handy et al. 1991).

Pounders were used throughout Polynesia wherever poi was prepared, but the pounders of the island of Kaua'i, Hawai'i are thought to be the most variable in their morphology (Brigham 1902:40). Most Hawaiian poi pounders were skillfully crafted out of fine basalt and often exhibit elaboration on their handles. No metal tool replaced poi pounders in the way that metal adzes replaced stone adzes, thus stone poi pounders are still in use today. Given the importance of this unique class of artifacts, surprisingly little systematic research has been done on Hawaiian poi pounders.

Studies of Hawaiian material culture have traditionally relied on artifact names and descriptions provided by European visitors and native historians of the late eighteenth or early nineteenth centuries. This history leaves unresolved a number of problems for artifact analysis today (see Field 1996; Graves and Erkelens 1991). Most importantly, ethnographically derived classifications are not well suited to examine artifact variability through time and across space, thus the next step is to develop systematic classifications using stylistic and functional attributes capable of measuring variability at various levels and employed in analysis.

Systematic classification may be used as a tool in archaeology to generate and identify cultural variability based on artifact analyses. Being able to measure variability in the analysis and classification of artifacts has the potential to enhance our

understanding of the archaeological record in key areas of interest, such as cultural interaction, adaptation to the environment or available resources, and spatial and temporal changes in settlement systems. Artifact classification makes the best use of the information potential of the archaeological record by allowing the analyst to track change through time and across space.

Studies of the agricultural landscape in Hawai'i tend to focus on agricultural features (e.g., terraces) in favor of tools used for food production or preparation (Ladefoged and Graves 2000). As organic materials are rarely preserved in Hawai'i, food remains are seldom available for study, thus food preparation equipment (e.g., poi pounders) may serve as a proxy indicator for some kinds of agricultural practices. Understanding the way in which food preparation tools changed can help to account for changes in settlement, technological production and use, and agricultural practices in different areas of an island, and also through time.

In this paper I use paradigmatic classification to examine stylistic variability in poi pounder morphology. I use the paradigmatic classes to examine the distribution of poi pounders across space at different scales of analysis. The spatial extent of this research is limited to the island of Kaua'i, which is historically known for its distinctive poi pounder forms.

## PREVIOUS RESEARCH

The earliest descriptions of Hawaiian poi pounders come from Brigham (1902). In his classic *Stone Implements and Stone Work of the Ancient Hawaiians*, Brigham describes these artifacts in striking detail and marvels at the effort put into their

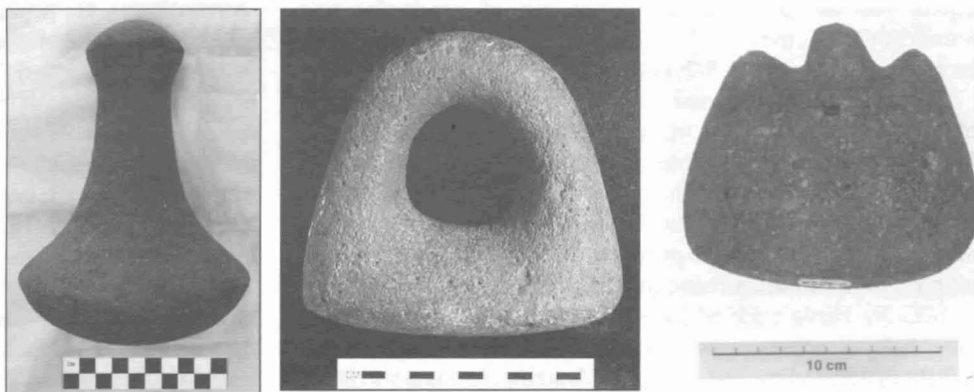


Figure 1: Examples of traditional poi pounder forms. Left to right: knobbed (also known as conical), ring, stirrup.

manufacture (1902:37). He compares the Hawaiian pounders with those of other areas in the Pacific and concludes that the variation in poi pounder form is greatest in Hawai'i (Brigham 1902:40).

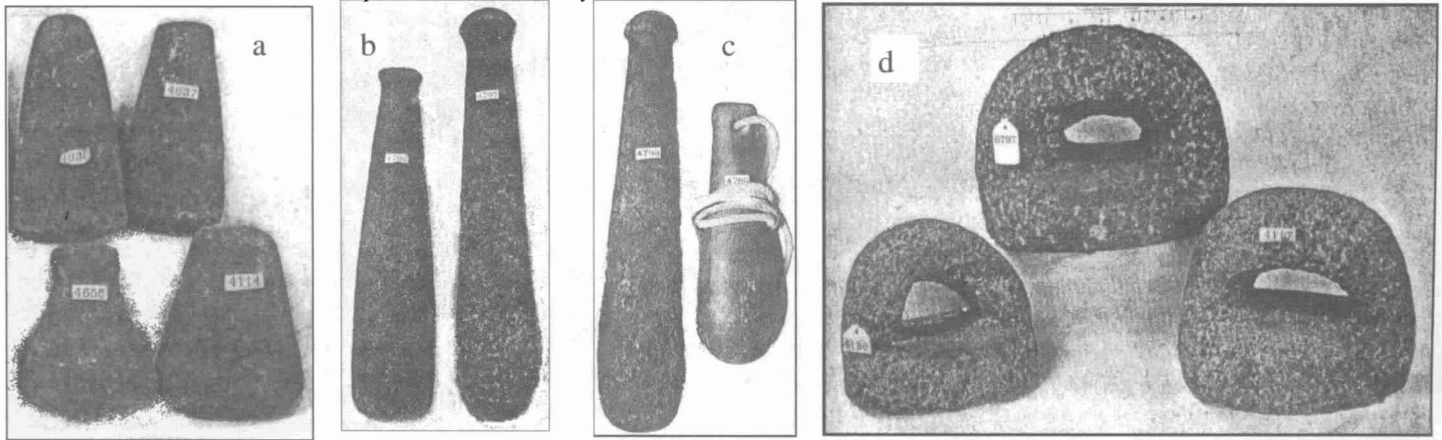


Figure 2: Examples of functional types. Left to right: a) mullers, b) pestles, c) clubs, d) *kapa* pressers (Brigham 1902: 32, Plate XLI, Plate XL, 51)

Brigham describes three general forms of Hawaiian poi pounders (Figure 1), but he never explicitly identifies the attributes that define each type. He also fails to define the artifacts of similar morphology, such as mullers, pestles, clubs, and *kapa* pressers (Figure 2). His artifact typology is based on “tradition”, which he gathered from missionary journals and interviews, conversations with Hawaiian *aliʻi* (royalty) and *makaʻainana* (commoners), and his own observations of traditional Hawaiian villages (Brigham 1902:iii, iv, 41). This approach is problematic in that artifacts are grouped according to their inferred function. Difficulties arise in deciding where to place objects that do not fit neatly into the groupings, artifacts that are similar in appearance but served different functions, or those with no known ethnographic function (See Field 1996; Graves and Erkelens 1991). For example, Brigham includes the same artifact in a group of clubs and a group of pestles (Brigham 1902: Plate XL, Plate XLI).

Brigham noted the occurrence of three types of poi pounders. The classic knobbed form (also known as conical pounders) was the most common, while the ring and stirrup forms were found only on Kauaʻi. Knobbed pounders were operated with one hand, while the stirrup forms were thought to require the use of both hands; the use of hands for ring pounders varied, with one hand used for pounding or two hands for grinding (Brigham 1902:49).

Regarding the ring and stirrup pounders, Brigham regrettably notes “When I first visited that island [Kauaʻi] in 1864 they were already obsolete and were shown as curiosities” (1902:46). Thus Brigham believes the ring and stirrup forms to be very old. Brigham gives the traditional names *pōhaku kuʻi puka* and *pōhaku puka* for the ring pounders; he does not provide a Hawaiian name for the stirrup form.

T. R. Hiroa’s (1964:27-33) early twentieth century accounts of poi pounders are notable as well. Published posthumously in 1964, *Arts and Crafts of Hawaii* presents a wealth of information on Hawaiian material culture described by Hiroa in the early 1900s. Like Brigham, Hiroa identified three types of poi pounders: the classic knobbed form, ring pounders, and stirrup forms (Hiroa 1964:27). Hiroa identified a number of variations within the knobbed grouping, distinguishing the common rounded-knob form from those with mushroom-shaped knobs, and those with flat tops (Hiroa 1964:28) and he grouped the

knobbed pounders according to size, with three categories: small, medium, and large. He distinguished poi pounders from similarly formed pestles and mullers by the distinctive flare at the base of the knobbed pounder.

Hiroa provides a slight variation to the Hawaiian name for the ring pounder, referring to it as *pōhaku puka kuʻi poi*, and like Brigham he does not know of a Hawaiian name for the stirrup pounder. Hiroa also maintains that the ring and stirrup forms are limited in distribution to Kauaʻi (1964:30-31). As with his examination of the knobbed pounders, Hiroa recognized variability within the ring and stirrup forms, noting differences in the shape of the pounding surface in the former and in the upper end treatment of the latter. He even characterized stirrup pounder tops as convex, concave, or straight (1964:31).

W. C. Bennett provides further analysis of Kauaʻi poi pounders in his 1931 landmark, *Archaeology of Kauai*. Based largely on fieldwork conducted in 1928-1929, this volume provides a valuable record of the material culture of Kauaʻi for the purpose of documenting the vanishing archaeological treasures of that island.

Bennett recognizes nothing distinctive about the knobbed pounders of Kauaʻi but puzzles over the enigmatic ring and stirrup forms. He posits that the ring and stirrup pounders were used for grinding rather than pounding and that these implements were intended for use by women (1931:69). Whereas men were the sole producers of poi on the main Hawaiian Islands, both sexes were allowed to pound poi on Kauaʻi and Niʻihau (Bennett 1931:69, 96). Bennett even maintains that the ring pounders were referred to as “*wahine* pounders” by Kauaʻi residents in the late 1920s (1931:69).

Bennett proposes that the stirrup forms are the oldest of the Kauaʻi pounders; the ring pounders are intermediate in age; and the knobbed forms are the most recent (1931:69, 70, 96). His comments on the distribution of poi pounder forms in the late 1920s support this hypothesis: “The conical forms [knobbed] are still in use to-day [sic] by Hawaiians and Chinese for pounding poi. The ring pounders, unused, are still to be found about the homes of the Hawaiians. The stirrup forms are found in the deserted archaeological sites” (Bennett 1931:69). Bennett points to isolation as the major causal factor for the unique material culture found on Kauaʻi (1931:97).

More recent reviews of Hawaiian material culture also

include poi pounders but fail to go beyond description and ethnography. In *Feathered Gods and Fishhooks*, Kirch includes a brief description of the Hawaiian poi pounder (1985:189). He calls it a "characteristic Hawaiian artifact" and notes the occurrence of three major forms, the conical pounder, which is most common, and the ring and stirrup forms that are restricted to Kaua'i (Kirch 1985:189). Kirch suggests that the limited distribution of these latter forms indicates that Kaua'i was more isolated than the other main islands in pre-contact times.

Kirch returns to the enigma of the Kaua'i poi pounders in a later paper entitled "Regional Variation in Hawaiian Prehistory" (1990:45-46). He identifies the ring and stirrup pounders as "the best-known examples of geographic style in Hawaiian artifact classes" and puzzles over why these functionally equivalent yet stylistically distinct artifacts were retained only on Kaua'i Island (Kirch 1990:45). Kirch challenges traditional explanations that see the ring and stirrup pounders as "archaic survivals of an earlier period of Hawaiian culture" because these forms are not found in other areas of the Pacific (1990:45). Instead he suggests that the three forms of Kaua'i poi pounders represent local styles that may have been linked to status differentiation in prehistory (Kirch 1990:45-46), suggesting that they were used contemporaneously. However, Sinoto (1970) has recovered two artifacts from the Marquesas which he believes are incipient forms of stirrup pounders; these are the only examples of these forms outside of Hawai'i.

Table 1. Database for study.

Collection	Number Examined
Grove Farm Ethnographic Collections	1 (1%)
Bishop Museum Ethnographic Collections	45 (47.9%)
Bishop Museum Archaeological Collections	7 (7.4%)
Bishop Museum Archives	41 (43.6%)
Total	94

The final notable mention of poi pounders in the literature comes from Summers' *Material Culture: The J. S. Emerson Collection of Hawaiian Artifacts* (1999:3-4). In this volume, Summers describes the artifacts that Emerson amassed in the late nineteenth century from the Hawaiian Islands. Among these are 15 knobbed pounders and six ring pounders, for which Summers provides careful measurements and fascinating ethnographic information. For example, one of the smaller-sized knobbed pounders was used to pound poi in secrecy at a time when *ali'i*, or chiefs, were known to confiscate food from the *maka'ainana*, or commoners (Summers 1999:3-4).

To summarize the literature, three basic forms of poi pounders are identified, but the distinguishing features of these forms are not clearly defined. All sources relate that two of the three poi pounder forms (i.e., the ring and stirrup forms) are known only to Kaua'i, yet we know nothing of their distribution across of that island. I will attempt to address these issues.

## METHODS

I examined a total of 94 poi pounders from Kaua'i (Table 1). One (1%) of these was housed at the Grove Farm Museum in Līhu'e and 52 (55.3%) were located at the Bishop Museum in Honolulu, where I was able to physically examine them. Seven of the Bishop Museum poi pounders were from archaeological contexts while the remainder were donated to the ethnographic collection. In addition, I gathered information from photographs and measurements of 41 (43.6%) ethnographic pounders recorded in the Bishop Museum archives, cross-referencing weights and photos to ensure that these were not poi pounders I had already physically measured. I included only Kaua'i pounders with provenience information from the traditional districts, and the dimensions necessary to clearly identified my classification.

For the pounders that I was able to physically examine, I took digital photographs and used these to obtain precise measurements to characterize the morphology of each artifact. Digitally measuring these variable artifacts proved advantageous in that the exact location of each measurement could be documented for future replication. Based on this information, I devised a simple paradigmatic classification (following Dunnell 1970) for poi pounders (Table 2). Paradigmatic classification is based on the intersection of attributes and dimensions. A dimension is a set of mutually exclusive features of artifacts, and modes are the different attribute states of a dimension. For example, the inner edge of a fishhook head is a dimension, while flat or stepped would be modes of that dimension.

Table 2. Paradigmatic classification for poi pounders.

### Dimension: Top

- Mode: 1) Convex  
2) Concave  
3) Flat  
4) Multiple

### Dimension: Upper Sides

- Mode: 1) Angled In  
2) Angled Out  
3) Straight  
4) Multiple

### Dimension: Perforation

- Mode: 1) Present  
2) Absent  
3) Partial

Paradigmatic classification is an important tool for archaeologists because classes are explicitly defined in terms of the modes within each dimension and every mode is explicitly defined (Dunnell 1970). In this way modes can be identified again not only by the analyst, but by anyone who wishes to replicate the work. Dimensions are not weighted; all dimensions and all modes are of the same importance. All classes are comparable to all other classes in the classification because they are all defined by a common set of attributes. Every dimension and every mode contributes to a class definition, thus paradigmatic classifications theoretically track all variability that we recognize; not



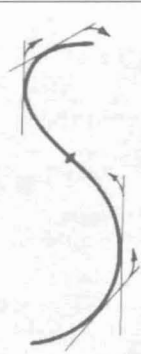


Figure 3. Points of inflection (Adapted from Shepard 1956:226).

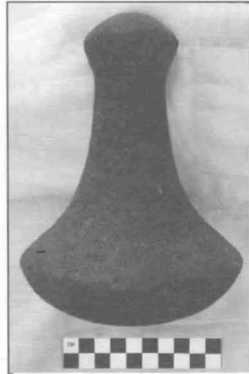


Figure 4. Example of points of inflection on a poi pounder.

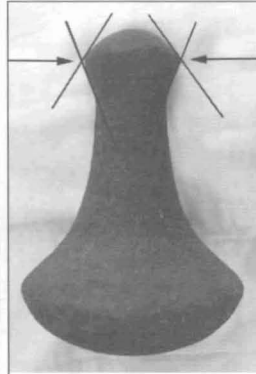


Figure 5. Definition of poi pounder top. Arrows indicate uppermost points of inflection on the sides of an artifact.

just that which the analyst thinks is important. Any mode can co-occur with any other mode, so unexpected variability can be recognized. New modes may be added freely without affecting the structure of the classification so assemblages can be compared across a large area.

The classification used here focuses on the handle part of the artifact, as this is the most promising area in which to identify stylistic variability. It includes three dimensions: 1) the morphology of the top, 2) the morphology of the upper sides, and 3) the presence/absence of perforation (See Table 2).

The definitions of the top and upper sides follow Shepard's analysis of pottery form (1956:225-227). Shepard utilizes a geometric approach that focuses on the contour of each artifact. Contour is characterized by points of inflection, which can be identified by "moving a straight edge as tangent along the contour of a vessel profile" (Shepard 1956:226). The lines created by the straight edge will change direction at the contours, and inflection points are located at the intersection of two lines (Figure 3). Shepard asserts that the inflection point is critical to characterizing the shape of a pottery vessel because "its position is definitive and it marks a fixed division of the vessel" (1956:226). The utility of the inflection point can be easily extended to the analysis of poi pounders, where such points mark different divisions of the tool (Figure 4).

The first dimension, top, is defined as the region above the uppermost points of inflection on the sides of an artifact (Figure 5). There are four modes that characterize the shape of this dimension: 1) convex, 2) concave, 3) flat, and 4) multiple. Figure 6 illustrates examples of each mode. The convex mode has a surface that curves upward, while a concave surface curves down toward the base of the artifact. The flat mode has a surface that is relatively level, and the multiple mode is a combination of any number of the above modes.

The next dimension characterizes the morphology of the upper sides of the poi pounder. The upper side is measured down from the highest point of inflection on the side of an artifact. There are four modes for this dimension: 1) angled in, 2) angled out, 3) straight, and 4) multiple (Figure 7). When measured against a horizontal line, upper sides that are angled in

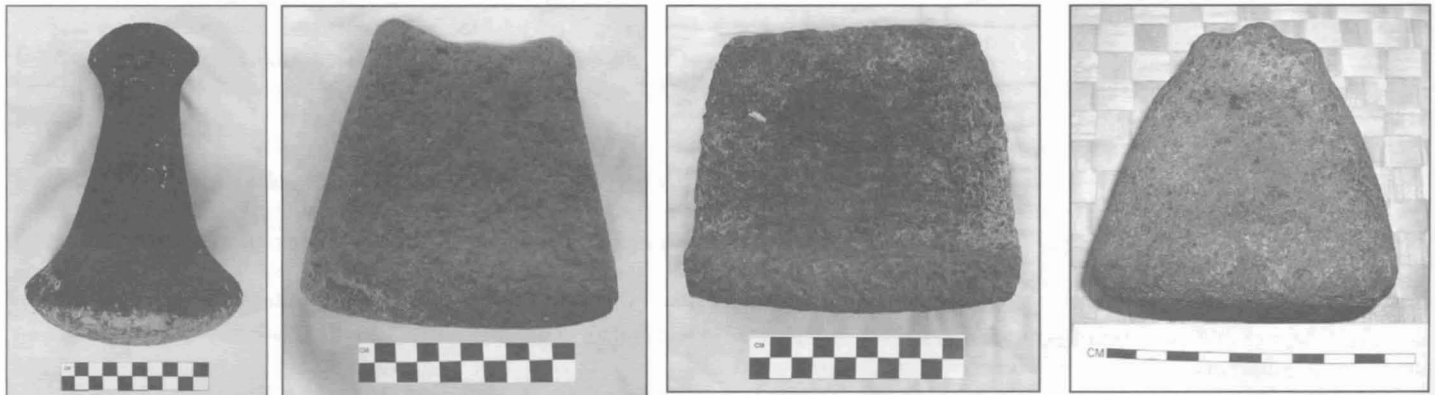


Figure 6. Examples of dimension 1 (top) modes. Left to right: convex, concave, flat, multiple.

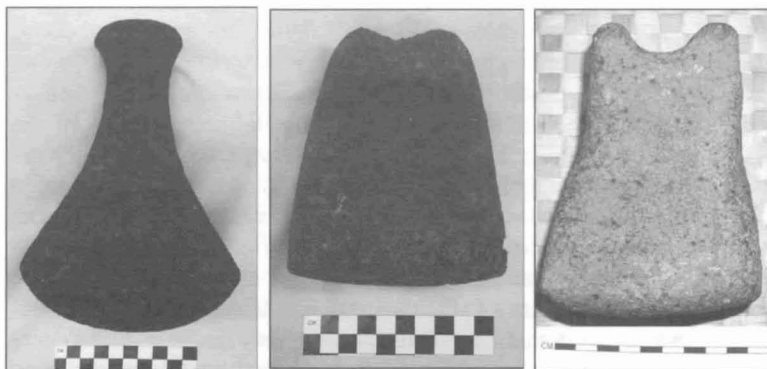


Figure 7. Examples of Dimension 2 (Upper Sides) Modes. Left to right: Angled In, Angled Out, Straight.

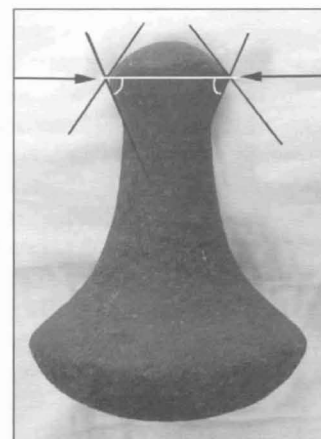


Figure 8. Measurement of Dimension 2 (Upper Sides) Arrows identify uppermost points of inflection. Measurement is taken from horizontal line. In this example angles are acute, thus upper sides are angled in.

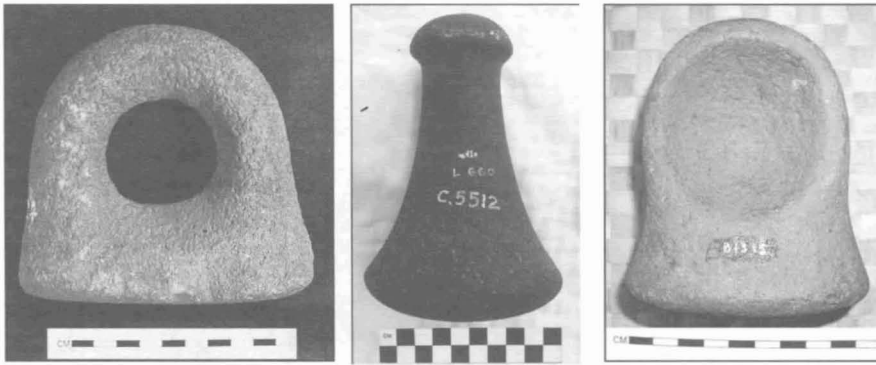


Figure 9: Examples of dimension 3 (perforation) modes. Left to right: present, absent and partial.

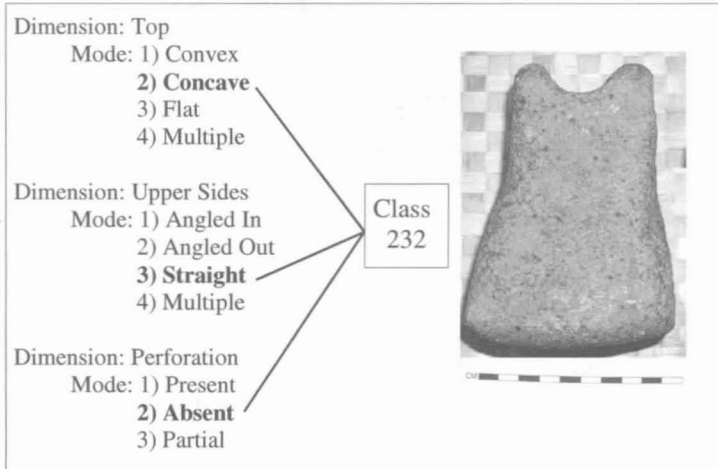


Figure 10. Example of a class 232 pounder.

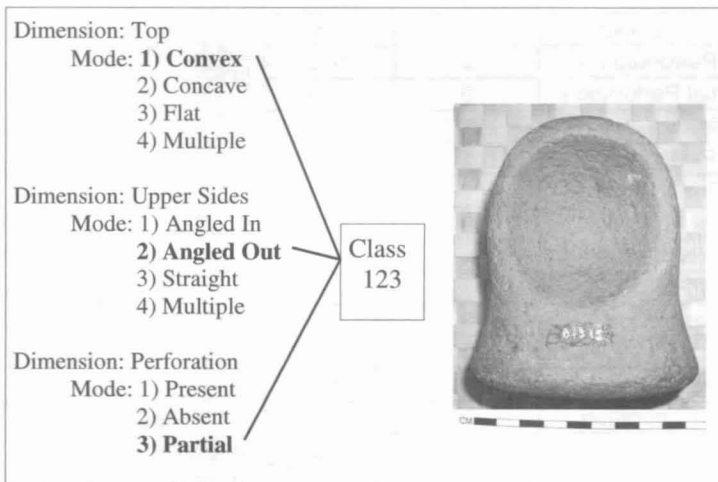


Figure 11: Example of a class 123 pounder.

exhibit an acute angle, while sides that are angled out exhibit an obtuse angle, and straight sides are roughly perpendicular to the horizontal line (Figure 8). The multiple mode accounts for artifacts whose left and right sides differ, although I did not observe any examples of this.

The final dimension characterizes perforation, which refers to the presence or absence of a puncture through the handle portion of an artifact. This dimension includes three modes: 1) present, 2) absent, and 3) partial. Present refers to an artifact with a complete puncture, while absent indicates an artifact

whose front or back surface is not indented at all. Partially perforated refers to an instance in which a cavity is present that did not completely puncture the artifact. Ring pounders are an example of a perforated poi pounder, the classic knobbed pounder is an example in which perforation is absent, and many stirrup pounders are partially perforated (Figure 9).

The first two dimensions have four modes and the last has three, therefore this classification produces 48 classes (4 x 4 x 3). For example, a pounder with a concave top, straight sides, and no perforation is a class 232 artifact (Figure 10), while one with a convex top, sides angled out and partial perforation would fall into class 123 (Figure 11).

These classes are clearly capable of tracking variability at a finer scale than the traditional three-group classification of poi pounders (knobbed, ring, and stirrup).

### ANALYSIS AND DISCUSSION

Ninety-four artifacts were grouped according to ancient *moku'āina*, or district boundaries (Armstrong 1983:95, Spriggs and Tanaka 1988:xiv), and by windward and leeward regions. The island of Kaua'i consists of five *moku'āina* districts: Halele'a, Ko'olau, Puna, Kona, and Nā Pali (Figure 12). The Kona and Nā Pali districts together make up the leeward region while the remaining three districts comprise the windward division.

Archaeologists often use districts as units of analysis in Hawai'i, as material culture is known to vary at this scale (Cordy and Kaschko 1980, Earle 1978, Graves and Cachola-Abad 1996, Kirch 1990, Kikiloi 2002). Because they were often ruled by distinct paramounts, district boundaries may constrain interaction, thus greater similarity between forms in a given district is expected. Likewise, artifacts of the same functional class are expected to differ across district boundaries in terms of style.

Ten (10.6%) poi pounders came from Halele'a district, 11 (11.7%) from Ko'olau, 26 (27.7%) from Puna, 39 (41.5%) from Kona, and 8 (8.5%) from Nā Pali. Stretching from Nu'alolo to Hanapepe, the Kona district is by far the largest, and fittingly includes the largest number of artifacts. Correspondingly, Nā Pali, the smallest district, includes the fewest number of artifacts. Class size is more similar when the artifacts are grouped according to the windward and leeward divisions, with 47 poi pounders (50%) from the windward side of the island and 47 (50%) from the leeward.

Fifteen of the 48 potential classes produced by the three dimensional classification were realized. Figure 13 and Table 3 show the distribution of artifacts in these classes. The most common classes were class 121 with 26 artifacts (29%), and classes 112 and 223 with 15 artifacts each (16%). Thus over 60% of the artifacts fell into just three of the 15 classes (121, 112, and 223). These three classes roughly conform to the traditional knobbed, ring, and stirrup types. The remaining pounders were distributed across 12 classes. Artifacts in these 12 classes would all have been identified as stirrup pounders in the traditional three-group typology.

Figure 14 illustrates the relative diversity of classes by district. As expected, the Nā Pali district with the fewest num-

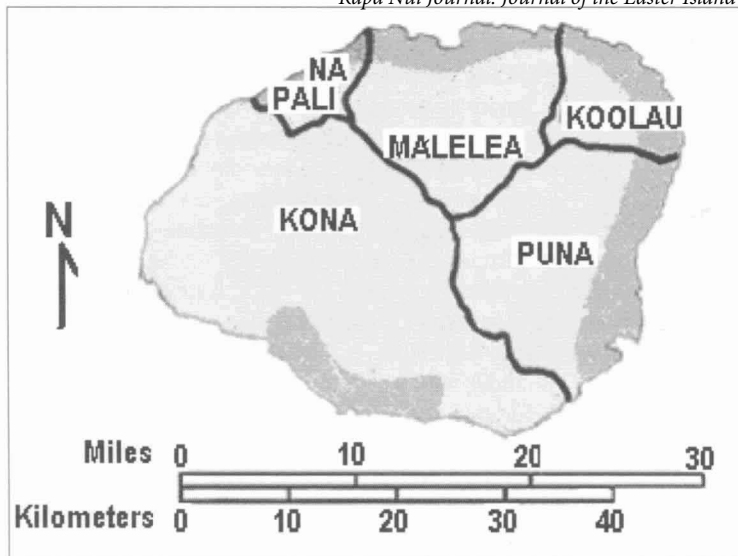


Figure 12. Map of Kaua'i moku'āina districts (adopted from Armstrong 1983:95).

ber of artifacts (8 pounders) yielded the fewest realized classes (3 classes). However, the 11 poi pounders from the Ko'olau district were spread across eight different classes, while Kona district's 39 pounders were distributed among only nine different classes. Halele'a district included 10 artifacts spread across six classes, while Puna district's 26 pounders were distributed among 10 classes.

Although the district samples are small, it appears that the poi pounders from Halele'a and Ko'olau are the most variable in form and those from Kona are the least variable. In fact, Ko'olau district's eight classes are all represented by fewer than two artifacts each. The greater diversity in Halele'a and Ko'olau may relate to a greater importance of poi in these districts, a longer

period of occupation in these areas, or both. Differences in variability may also be explained by social factors, with areas under tighter political control or areas with fewer artifact manufacturers exhibiting more homogenous pounders.

Five artifact classes were found in a single district: 122 from Kona, 132 from Halele'a, 211 and 212 from Ko'olau, and 332 from Puna. All are represented by only one artifact each, except class 122, which contained five artifacts all from the Kona district. These distributions may be a product of sampling, or may represent distinct personal or geographic styles.

Figure 15 illustrates the distribution of classes by the

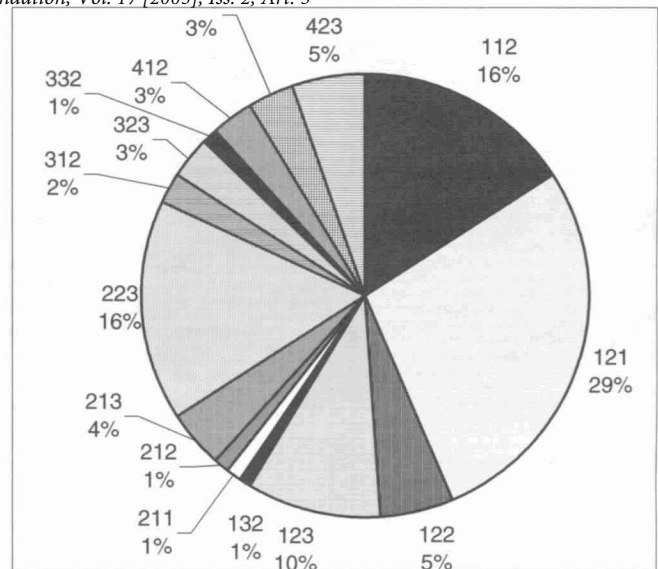


Figure 13. Frequency of realized classes as shown in Table 3.

Table 3. Data for realized classes.

Class	Description of Class	Number of Artifacts	Percent of Total
112	Convex Top, Sides Angled in, No Perforation	15	16%
121	Convex Top, Sides Angled Out, Full Perforation	26	29%
122	Convex Top, Sides Angled Out, No Perforation	5	5%
123	Convex Top, Sides Angled Out, Partial Perforation	9	10%
132	Convex Top, Straight Sides, No Perforation	1	1%
211	Concave Top, Sides Angled In, Full Perforation	1	1%
212	Concave Top, Sides Angled In, No Perforation	1	1%
213	Concave Top, Sides Angled In, Partial Perforation	4	4%
223	Concave Top, Sides Angled Out, Partial Perforation	15	16%
312	Flat Top, Sides Angled In, No Perforation	2	2%
323	Flat Top, Sides Angled Out, Partial Perforation	3	3%
332	Flat Top, Straight Sides, No Perforation	1	1%
412	Multiple Top, Sides Angled In, No Perforation	3	3%
413	Multiple Top, Sides Angled In, Partial Perforation	3	3%
423	Multiple Top, Sides Angled Out, Partial Perforation	5	5%

windward and leeward divisions. The classic knobbed form represented by class 112 is predominantly a leeward phenomenon, while the ring pounders (class 121) were equally distributed on both sides of the island. The more variable stirrup forms were more common on the windward side. The windward poi pounders exhibited greater diversity overall, with 47

artifacts spread across 14 classes. By contrast, leeward's 47 poi pounders were distributed among only 9 classes. These differences may be explained by the same factors suggested for district diversity. The greater variability in windward pounders may be attributed to a greater importance of poi in the wet windward region or a longer period of occupation on the windward side of the island, or both. The degree of political control and the number of artifact manufacturers may have played a role as well.

In sum, interesting patterns were revealed when the stylistic classes were arrayed across the districts and regions of Kaua'i. The poi pounders of Halele'a and Ko'olau district appeared most variable, and those of Kona least variable. The knobbed pounders of class 112 were more common on the leeward side of the island, while the diverse stirrup forms were more common in the windward region.

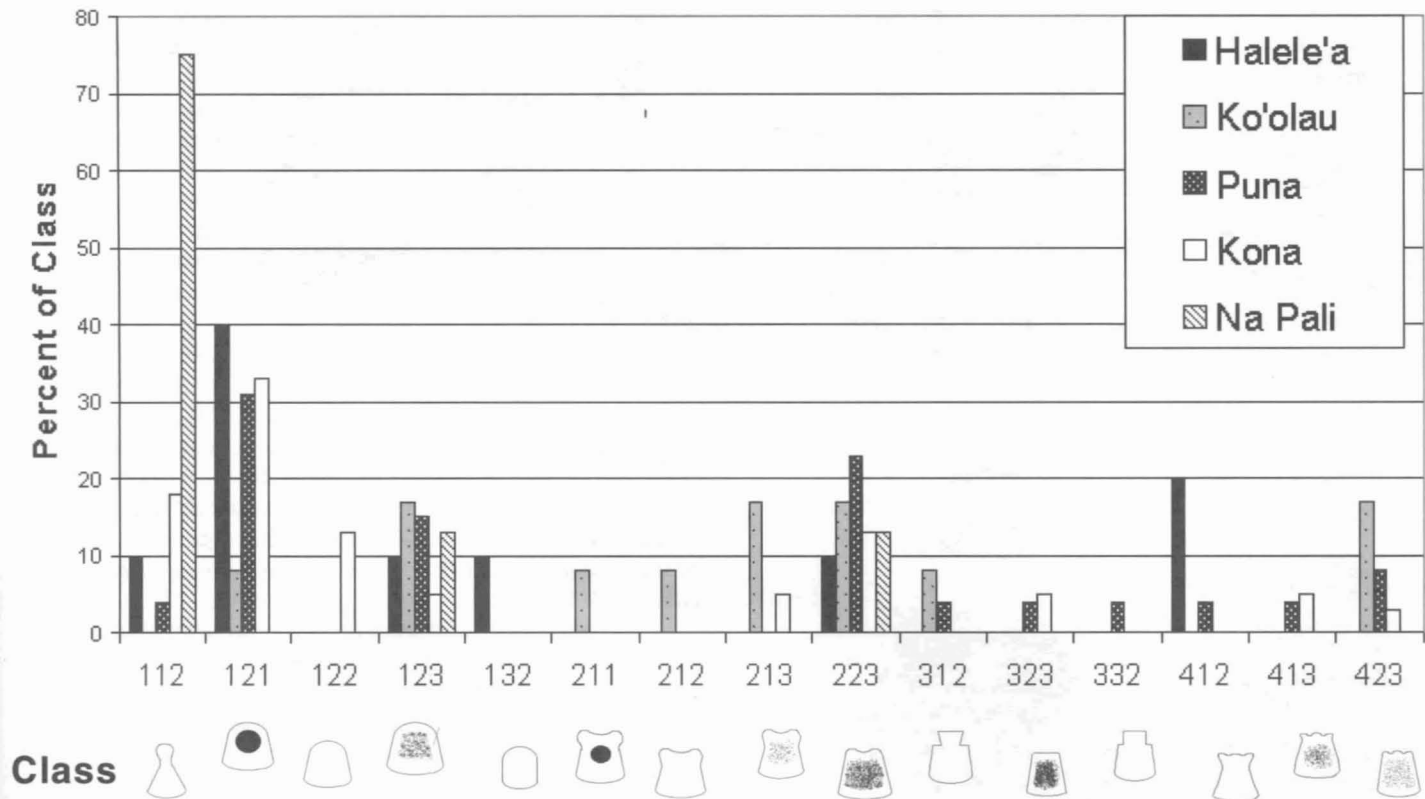


Figure 14. Distribution of Classes by District.

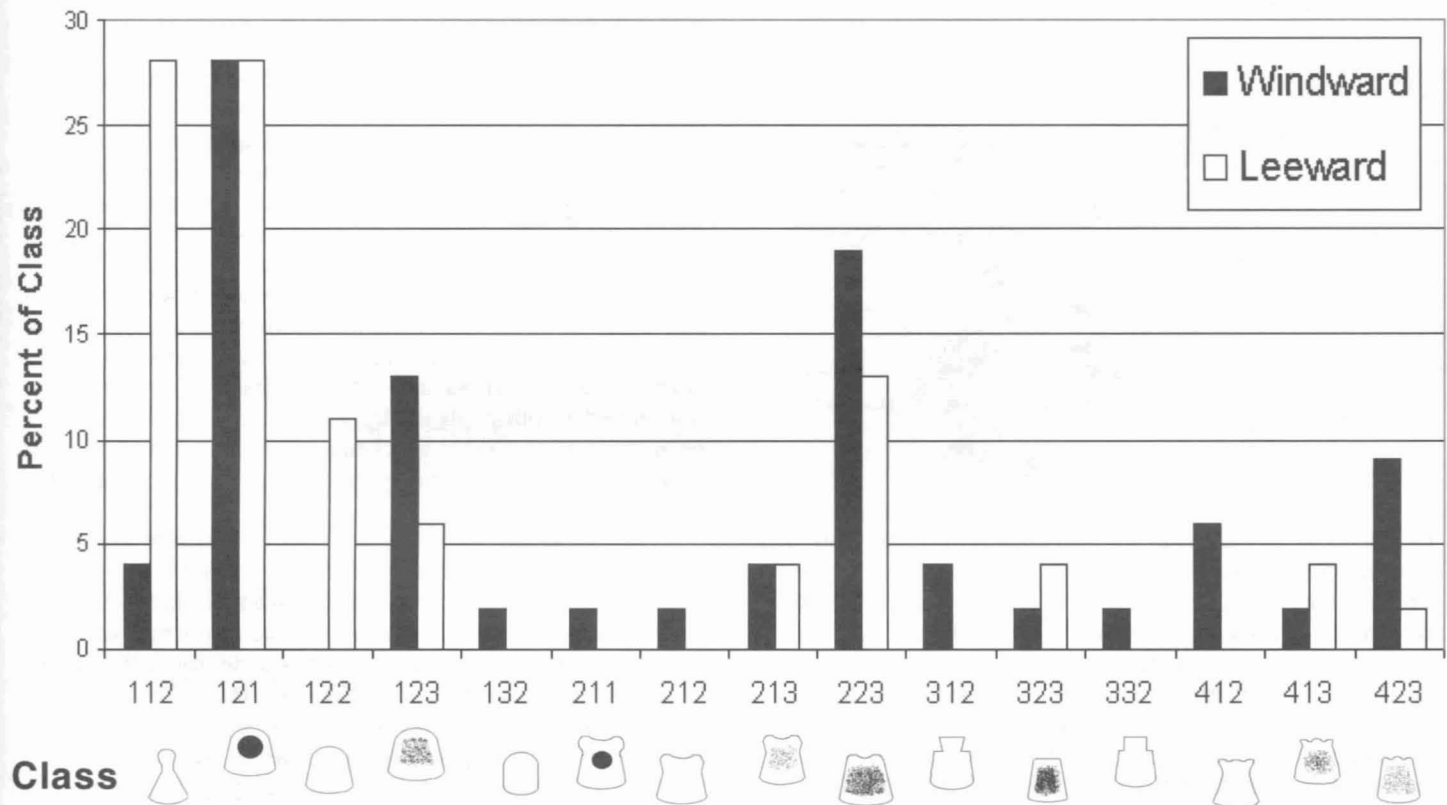


Figure 15. Distribution of Classes by Region.



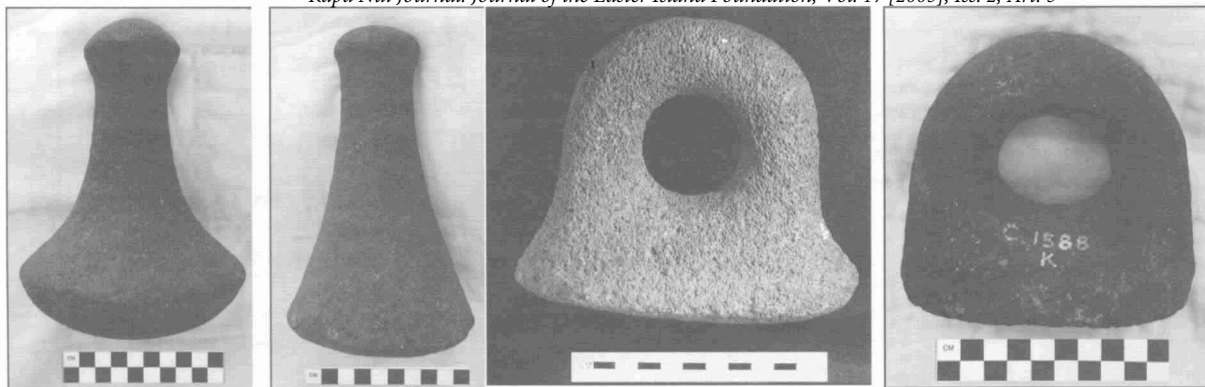


Figure 16. Examples of variation in flare of base, knobbed and ring pounders.

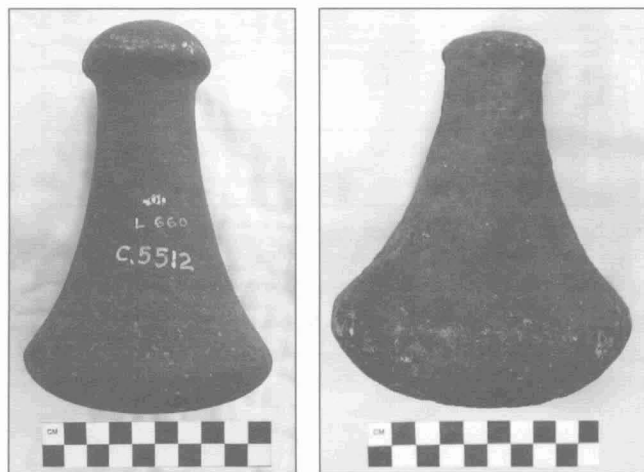


Figure 17. Examples of variation in top morphology, knobbed pounders.

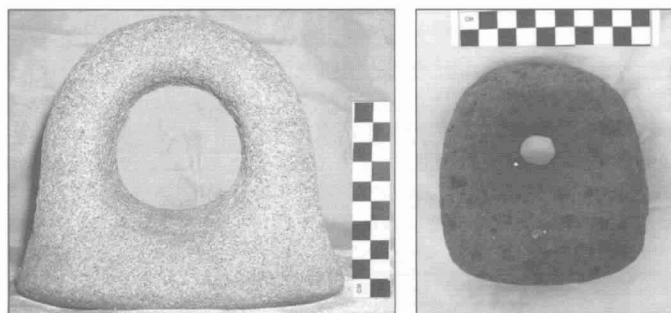


Figure 18. Examples of variation in perforation size, ring pounders.

## CONCLUSION

This analysis of Hawaiian poi pounders shows that these artifacts are highly variable in morphology. The 94 artifacts in the sample were distributed across 15 different classes, demonstrating that these implements show more variability than can be accounted for by the traditional three-group classification of knobbed, ring, and stirrup pounders described in the literature. Thus, abandoning the traditional ethnographically derived classifications of Hawaiian artifacts would enable archaeologists to identify and systematically study much of the variability that has often been overlooked.

Most variability in this classification appears within the stirrup group, suggesting that this artifact type may never have

been as well defined (it acts as a default group for any pounders not resembling the knobbed or ring forms). The knobbed and ring pounders encompass only one class each, 112 and 121 respectively (see Figure 14), suggesting that their shape

manufacture may have been more standardized or specialized or their use more limited. This leaves the stirrup forms distributed across the remaining 13 classes, although there appear to be transitional forms between the three types (e.g., classes 122, 123, and 211).

Through visual inspection, one can ascertain that the stirrup pounders are clearly more variable than the other forms, but the knobbed and ring pounders are not completely homogeneous. The bases of these artifacts flare to differing degrees (Figure 16) and even though the tops of the knobbed pounders were all convex with upper sides angled in, variations occur in this region as well, ranging from mushroom-shaped to underdeveloped (Figure 17). Perforation size varied considerably in ring pounders as well (Figure 18). The classification was unable to detect variability at this level, but the addition of more dimensions would resolve this problem.

Interesting patterns were evident when these artifacts were grouped according to district and region. Though small in area, Ko'olau district exhibited the most diversity of poi pounder form. By contrast, the large Kona district was least variable. The classic knobbed pounders were more common on the leeward side of the island, while the windward poi pounders were more diverse.

Finally, while I focused my research on Kaua'i, I did come across nine poi pounders from other Hawaiian islands that were not of the classic knobbed form. This is a direct contradiction to the literature, which consistently restricts ring and stirrup pounders to Kaua'i. These artifacts may have been transported to other islands by Kaua'i migrants or may have been items of exchange; geochemical sourcing would reveal if these pounders were actually manufactured from Kaua'i basalts.

In conclusion, the research shows the value of examining artifacts from museum collections, even though they lack precise provenience. Many of the poi pounders in this sample had provenience information only to the scale of district, yet I was able to identify spatial patterns in poi pounder form. By making better use of previously excavated artifacts and those donated to museums, we can acquire more knowledge without excavating new sites. This approach contributes to our understanding of these collections and the past while helping to preserve the archaeological record. Hawaiian poi pounders are unique artifacts that have received inadequate attention by the archaeological community. Paradigmatic classification highlights some



of the variability within and between the traditional three-group classification of poi pounders and identifies similarities and differences in poi pounder form across the island of Kaua'i. Further research is needed to fully understand these fascinating artifacts and the skilled craftsmen who made them.

## REFERENCES

- Armstrong, R. W. 1983. *Atlas of Hawaii*, Second Edition, edited by R. W. Armstrong. Honolulu: University of Hawaii Press.
- Bennett, W. C. 1931. *Archaeology of Kauai*. Bernice P. Bishop Museum Bulletin 80. Honolulu: Bishop Museum Press.
- Brigham, W. T. 1902. *Stone Implements and Stone Work of the Ancient Hawaiians*. Memoirs of the Bernice P. Bishop Museum. Vol. I, No. 4. Honolulu: Bishop Museum Press.
- Cordy, R. and M. W. Kaschko 1980. Prehistoric Archaeology in the Hawaiian Islands: Land Units Associated with Social Groups. *Journal of Field Archaeology* 7:403-16.
- Dunnell, R. C. 1970. Seriation Method and Its Evaluation. *American Antiquity*. 35(3):305-319.
- Earle, T. K. 1978. *Economic and Social Organization of a Complex Chieftdom: The Halelea District, Kaua'i, Hawai'i*. Museum of Anthropology University of Michigan Anthropological Papers Number 63, Ann Arbor: Regents of the University of Michigan.
- Field, J. S. 1996. The Impact of a Functional Typology in Hawaiian Artifact Classification. Unpublished MA Paper. Department of Anthropology, University of Hawai'i, Honolulu.
- Graves, M. W. and C. K. Cachola-Abad 1996. Seriation as a Method of Chronologically Ordering Architectural Design Traits: An Example from Hawai'i. *Archaeology in Oceania* 31:19-32.
- Graves, M. W. and C. Erkelens 1991. Who's in Control? Method and Theory in Hawaiian Archaeology. *Asian Perspectives* 30(1).
- Handy, E. S., E.G. Handy and M. K. Pukui 1991. *Native Planters*, Revised Edition. Bishop Museum Bulletin Number 233. Honolulu: Bishop Museum Press.
- Hiroa, T. R. 1964. *Arts and Crafts of Hawaii, Section I, Food*. Bernice P. Bishop Museum Special Publication 45, Honolulu: Bishop Museum Press.
- Kikiloi, S. K. 2002. *Measuring Interaction in Pre-Contact O'ahu Through the Use of Heiau Architecture*. Presented at the 15<sup>th</sup> Annual Society for Hawaiian Archaeology Conference in Lihue, Kaua'i.
- Kirch, P. V. 1985. *Feathered Gods and Fishhooks*. Honolulu: University of Hawaii Press.
- Kirch, P. V. 1990 Regional Variation in Hawaiian Prehistory. *Pacific Studies* 13(2):41-53.
- Ladefoged, T. N. and M. W. Graves 2000. Evolutionary Theory and the Historical Development of Dry-Land Agriculture in North Kohala, Hawaii. *American Antiquity* 65:423-448.
- Pukui, M. K., S. H. Elbert and E. T. Mo'okini 1974. *Place Names of Hawai'i*. Honolulu: University of Hawai'i Press.
- Shepard, A.O. 1956. *Ceramics for the Archaeologist*. Publication 609, Washington D.C.: Carnegie Institution of Washington.
- Sinoto, Y. H. 1970. An Archaeologically Based Assessment of the Marquesas as a Dispersal Center in East Polynesia. *Studies in Oceanic Culture History, Vol. 1*. R. C. Green and M. Kelly, eds. Pacific Anthropological Records 11:105-132. Honolulu: Bishop Museum Press.
- Spriggs, M. J. T. and P. L. Tanaka 1988. *Na Mea 'Imi I Ka Wā Kahiko: An Annotated Bibliography of Hawaiian Archaeology*, Compiled by M. J. T. Spriggs and P. L. Tanaka. Asian and Pacific Archaeology Series 11. Honolulu: University of Hawaii Press.
- Summers, C. C. 1999. *Material Culture: The J. S. Emerson Collection of Hawaiian Artifacts*. Honolulu: Bishop Museum Press.

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